CLAIMS

1. Device having a voice communication server structure comprising a rack called main rack including:

   - a board called master board equipped with:
     - a Central Processing Unit (CPU),
     - a Digital Signal Processor (DSP) called master DSP for a telephonic application running on said master board, and having an access to a switching unit,
   - a second DSP, distinct from said master DSP, for a telecommunication application and having an access to a switching unit,
   - inter-DSP communication means arranged to allow in real time a direct exchange of information between said master and second DSP.

2. Device in accordance with claim 1 whereby said master DSP and said second DSP comprise :
   - several resources chosen among one or more of the following : Analog Serial Link (ASL) resources, High Level Data Link (HDLC) resources and On Board Controller (OBC) resources,
   - an operating system including :
     - internal memories mastered by memory management means,
     - means managing said access to a switching unit,
   - resource management means arranged to select one of said resources,
   - a scheduler included in said operating system and arranged to execute said selected resource.

3. Device in accordance with any of claims 1 or 2 whereby said inter-DSP communication means comprise an information coding resource included in said master DSP and/or in said second DSP and coding said

information to be exchanged, said coded information being a frame containing control information, data and checksum.

4. Device in accordance with claim 3 whereby said inter-DSP communication means comprise an inter-DSP resource included in said second DSP and/or in said master DSP and arranged to receive coded information.

5. Device in accordance with any of claims 3 or 4 whereby said second DSP runs on a second board distinct from said master board and in that said inter-DSP communication means comprise a link allowing full duplex information exchanges and connecting said master board and said second board together.

6. Device in accordance with claim 5 whereby said second board is an applicative board included in said main rack, and said link is a synchronous link and is preferably a Pulse Coded Modulation (PCM) link.

7. Device in accordance with claim 6 whereby said telecommunication application of said second DSP is an Internet Protocol (IP) application preferably chosen among Internet Access and Voice over IP.

8. Device in accordance with any of claims 6 or 7 whereby said master DSP and said second DSP comprise communication management means respectively having access to memories of said master board and of said applicative board.

9. Device in accordance with claim 5 whereby said second board is an expansion board included in an expansion rack in slave mode with respect to said main rack, and said link is a synchronous link and is preferably an High Speed Link (HSL).

10. Device in accordance with claim 9 whereby said inter-DSP communication means comprise communication management means included in said second DSP and arranged to decode said coded information and/or to code information to be exchanged.

11. Device having a voice communication server structure comprising an expansion rack without CPU and including :

- an expansion board equipped with a slave DSP for a telephonic application running on said expansion board, said slave DSP having an access to a switching unit,

- an expansion applicative board distinct from said expansion board equipped with an applicative slave DSP for a telecommunication application which is not a telephonic application, running on said expansion applicative board, said applicative slave DSP having an access to a switching unit,

whereby it comprises inter-DSP communication means arranged to allow in real time a direct exchange of information between at least said slave DSP and said applicative slave DSP.

12. Device in accordance with claim 11 whereby said inter-DSP communication means comprise :

- a link allowing full duplex information exchanges and connecting said expansion board and said expansion applicative board together.

13. Device in accordance with any of claims 11 or 12 whereby said applicative slave DSP and said slave DSP comprise :

- several resources chosen among one or more of the following : ASL resources, HDLC resources and OBC resources,

- an operating system including :

  • internal memories mastered by memory management means,

  • means managing said access to a switching unit,

- resource management means arranged to select one of said resources,

- a scheduler included in said operating system and arranged to execute said selected resource.

14. Device in accordance with any of claims 11 to 13 whereby said inter-DSP communication means comprise :

- an information coding resource included in said slave DSP and/or said applicative slave DSP and coding said information to be exchanged, said coded information being a frame containing control information, data and checksum,

5

- an inter-DSP resource included in said applicative slave DSP and/or said slave DSP and arranged to receive said coded information.

15. Device in accordance with any of claims 11 to 14 whereby said telecommunication application is an Internet Protocol (IP) application preferably chosen among Internet Access and Voice over IP.

10